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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/576,450

04/20/2006

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Q94064

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EXAMINER

BUIE, NICOLE M

ART UNIT

PAPER NUMBER

1796

MAIL DATE

DELIVERY MODE

07/24/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/576,450	Applicant(s) TSUDA ET AL.	
	Examiner NICOLE M. BUIE	Art Unit 1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 June 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) 9-12 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>20060420/20060717</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

Claims 9-12 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention and species, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 06/06/2008.

The requirement is still deemed proper and is therefore made FINAL.

Information Disclosure Statement

The following documents, JP 62-288615, JP 59-196308, and JP 62-288615, cited in the information disclosure statement filed on 07/17/2006 have been already submitted and considered as part of the information disclosure statement filed on 04/20/2006.

The information disclosure statement filed 07/17/2006 fails to comply with 37 CFR 1.98(a)(2), which requires a legible copy of each cited foreign patent document; each non-patent literature publication or that portion which caused it to be listed; and all other information or that portion which caused it to be listed. It has been placed in the application file, but the foreign reference JP 61-33848 has not been considered since no copy has been provided.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 3, 5, 6, and 7 are rejected under 35 U.S.C. 102(b) as being anticipated by Mitsuata et al. (WO 03/002660, see English equivalent US 2004/0192828 for citation).

Regarding claims 1, 3, 5, and 6, Mitsuata et al. discloses a tetrafluoroethylene polymer ("VDF/TFE/CTFE) aqueous dispersion in the presence of a fluorovinyl group of formula (V) wherein f is 1 and Y represents H, NH₄ or an alkali metal (Synthetic Example 2, [0033]-[0034],[0090]) where an example is shown below:



and said tetrafluoroethylene polymer aqueous dispersion has a fluorine-containing surfactant content is 97 ppm by mass based on the aqueous dispersion (as compared to not higher than 1000 ppm as required by said claim) ([0089]-[0090]). The tetrafluoroethylene polymer has a tetrafluoroethylene unit therefore the tetrafluoroethylene polymer is a perfluoro-based polymer.

Regarding claim 7, Mitsuata et al. discloses the tetrafluoropolymer aqueous dispersion has a solid matter concentration of 40 wt% by mass (Synthetic Example 2, [0089]-[0090]).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

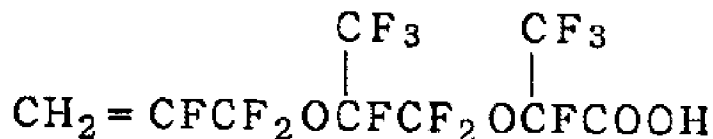
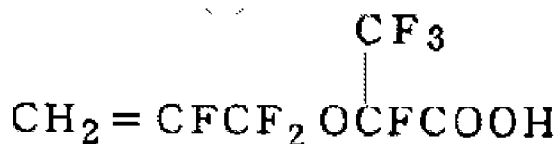
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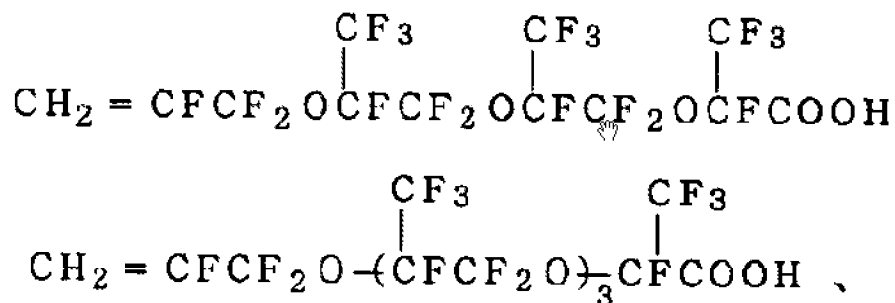
This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Araki et al. (JP 95033782 A1, see machine translation for citation) in view of Tan et al. (US 2003/0181572).

This is an alternative rejection to claims 1, 3, 5, 6, and 7 above to meet the limitations of the amount and concentration of the tetrafluoropolymer polymer dispersion.

Regarding claims 1, 3, 4, 5, and 6, Araki et al. discloses a tetrafluoroethylene polymer aqueous dispersion containing a fluorovinyl group (Claim 1, P25-26, P33-34) for example the formulas as shown below:





The tetrafluoroethylene polymer has a tetrafluoroethylene unit therefore the tetrafluoroethylene polymer is a perfluoro-based polymer.

However, Araki et al. does not disclose said tetrafluoroethylene polymer aqueous dispersion has a fluorine-containing surfactant content of not higher than 1000 ppm by mass. Tan et al. teaches the amount of fluorinated surfactant is less than 1000 ppm [0049]. Additionally, Tan et al. teaches that the aqueous dispersion may have no fluorinated surfactant after polymerization [0065]. Araki et al. and Tan et al. are analogous art concerned with the same field of endeavor, namely aqueous dispersion of fluoropolymers, such as tetrafluoroethylene based polymers with fluorovinyl emulsifiers. It would have been obvious to one of ordinary skill in the art at the time of invention to use the concentration of fluorinated surfactants of Tan et al. in the dispersion of Araki et al., and the motivation to do so would have been as Tan et al. suggests, to eliminate the need to remove remaining fluorinated surfactant [0051].

Regarding claim 2, Araki et al. discloses the tetrafluoroethylene polymer aqueous dispersion wherein the tetrafluoroethylene polymer has a tetrafluoroethylene unit content of 20-99.99 mol % (as compared to exceeding 40 mole percent as required by said claim) (Claim 1).

Regarding claim 7, Araki et al. does not disclose the tetrafluoroethylene polymer aqueous dispersion which has a solid matter concentration of 5 to 70% by mass. Additionally, Tan et al. teaches the fluoropolymer in the amount between 10% to 50% by weight [0069]. It

would have been obvious to one of ordinary skill in the art at the time of invention to use the amount of solid matter of Tan et al. in the dispersion of Araki et al., and the motivation to do so would have been as Tan et al. suggests, to prepare a more diluted dispersion of a desired level in the composition [0069].

Regarding claim 8, Araki et al. does not disclose the tetrafluoroethylene polymer aqueous dispersion wherein the particle comprising the tetrafluoroethylene polymer has an average primary particle diameter of 50 to 500 nm. However, Tan et al. teaches the particle size of the fluoropolymer particles is preferably not more than 300 nm [0070]. It would have been obvious to one of ordinary skill in the art at the time of invention to use the particle size of Tan et al. in the dispersion of Araki et al., and the motivation to do so would have been to improve the stability of the dispersion so that particles will not fall out of the dispersion [0070].

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned

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with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1, 3, 5, 6, 7, and 8 provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 13, 18, 19 of copending Application No. 10/481811 in view of Araki et al. (JP 95033782 A1, see machine translation for citation) and in view of Tan et al. (US 2003/0181572) as evidenced by Cavanaugh et al. (US 2003/0130393).

Application No. '811 recites an aqueous emulsion resin composition comprising a compound represented by the formula shown below (claim 13):



[wherein e is 0 or an integer from 1 to 10, and Y is SO_3M or COOM (with M being H , NH_4 , or an alkali metal)];

Application No. '811 further recites the resin composition has a particle size from about 50 nm to about 400 nm or from about 50 nm to about 200 nm (claims 18 and 19).

However, Application '811 does not disclose said tetrafluoroethylene polymer aqueous dispersion has a fluorine-containing surfactant content of not higher than 1000 ppm by mass. Tan et al. teaches that the amount of fluorinated surfactant is less than 1000 ppm [0049].

Additionally, Tan et al. teaches that the aqueous dispersion may have no fluorinated surfactant after polymerization [0065]. Application '811 and Tan et al. are analogous art concerned with the same field of endeavor, namely aqueous dispersion of fluoropolymers with fluorovinyl emulsifiers. It would have been obvious to one of ordinary skill in the art at the time of

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invention to use the concentration of fluorinated surfactants of Tan et al. in the dispersion of Application '811, and the motivation to do so would have been as Tan et al. suggests, to reduce the likelihood of having to remove remaining fluorinated surfactant [0051].

However Application '811 does not disclose a tetrafluoroethylene polymer. Araki et al. teaches using a tetrafluoroethylene polymer (Claim 1, P84). Araki et al. and Application No. '811 are analogous art concerned with the same field of endeavor, namely aqueous dispersion of fluoropolymers with fluorovinyl emulsifiers. It would have been obvious to one of ordinary skill in the art at the time of invention to use the polymer of Araki et al. in the dispersion of Araki et al., and the motivation to do so would have been to improve chemical and heat resistance as evidenced by Cavanaugh et al. [0002].

However Application '811 does not disclose a solid matter concentration of 5 to 70 % by mass. Additionally, Tan et al. teaches the fluoropolymer in the amount between 10% to 50% by weight [0069]. It would have been obvious to one of ordinary skill in the art at the time of invention to use the amount of solid matter of Tan et al. in the dispersion of Application '811, and the motivation to do so would have been as Tan et al. suggests, to prepare a more diluted dispersion of a desired level in the composition [0069].

However, Application '811 does not disclose the tetrafluoroethylene polymer aqueous dispersion wherein the particle comprising the tetrafluoroethylene polymer has an average primary particle diameter of 50 to 500 nm. Additionally, Tan et al. teaches the particle size of the fluoropolymer particles is preferably not more than 300 nm [0070]. It would have been obvious to one of ordinary skill in the art at the time of invention to use the particle size of Tan et

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al. in the dispersion of Application '811., and the motivation to do so would have been to improve the stability of the dispersion.

This is a provisional obviousness-type double patenting rejection.

Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to NICOLE M. BUIE whose telephone number is (571)270-3879.

The examiner can normally be reached on Monday-Thursday with alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Eashoo can be reached on (571)272-1197. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/MARK EASHOO, Ph.D./
Supervisory Patent Examiner, Art Unit 1796
21-Jul-08

/N. M. B./
Examiner, Art Unit 1796
7/17/2008

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